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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/491,994	01/26/2000	Curtis Gregory Kelsay	10990356-1	9325

22879 7590 08/26/2003

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FORT COLLINS, CO 80527-2400

EXAMINER

WILLIAMS, KEVIN D

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/491,994

Applicant(s)

KELSAY, CURTIS GREGORY

Examiner

Kevin D. Williams

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 20-23,25-29,33-39 and 41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-23,25-29,33-39 and 41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 20-23, 25-29, 33-39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuji (US 5,796,890) in view of Pressler (US 6,005,700), Sedlmayr (US 6,034,818), and Kawakami (US 5,848,203).

Tsuji teaches a device adapted to optically exchange information between an optical transducer adapted to transmit and receive information optically and an optical data port adapted to communicate with an open environment, comprising a transmit fiber cable 41a adapted to optically transmit information optically transmitted by the optical transducer 20,21 (col. 8, lines 46-52) from the optical transducer to the optical data port (noted in Fig. 1), a receive fiber cable 41b adapted to optically receive information via the optical data port and optically transmit the received information to the optical transducer 20,21 (col. 8, lines 46-52), the transmit fiber optic adapted to exit light from the optical data port to the open environment, the receive fiber cable being adapted to receive light from the open environment on the optical transducer, a first end (near 51b) of the transmit fiber optic 41a being adapted to be optically coupled to the optical transducer and a second end (near 51a) of the transmit fiber cable being

adapted to provide a portion of the optical data port (noted in Fig. 1), a first end (near 51d) of the receive fiber cable 41b being adapted to be optically coupled to the optical transducer 20,21 and a second end (near 51c) of the receive fiber cable 41b being adapted to provide a portion of the optical data port (noted in Fig. 1), the fiber cable providing bi-directional communication between the optical transducer and the optical data port, the optical transducer including a receive portion and a transmit portion.

Tsuji does not teach a transmit light pipe and a receive light pipe, a first lens of the transmit light pipe, first and second lens of the receive light pipe where the lenses are formed as part of the light pipes, a second lens of the transmit pipe for increasing an angle of and diverging light exiting the optical data, an optical interlink for exchanging information for a printer, where the transducer and the light pipe are disposed within a printer and where the light pipe is adapted to optically exchange information with the optical transducer and externally of the printer, and an infrared transducer. Tsuji also does not teach the method steps of receiving light rays from the open environment at the optical data port and exiting transmitted light rays from the optical data port to the open environment.

Pressler teaches that light pipes and fiber optic cables are interchangeable light transfer mediums (col. 2, lines 8-10). Pressler also teaches light pipes 160,165 that receive light rays from the open environment (at 170 in Fig.1) and exit transmitted light rays from an optical data port to the open environment (at 172 in Fig. 1). Pressler teaches that it is advantageous to receive and transmit light rays to the open environment in order to communicate the light rays with portable peripheral devices.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the fiber optic cables of Tsuji to be light pipes, because light pipes and fiber optic cables function equally as well in transferring light as taught by Pressler. In view of the teaching of Pressler, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tsuji to receive light rays from the open environment and transmit light rays to the open environment, in order to allow the light rays to communicate with portable peripheral devices as taught by Pressler.

Sedlmayr teaches a light pipe 75 having a first lens 45 and a second lens 71 being formed as part of the pipe. Sedlmayr provides the lens 45 and the lens 71 to collimate the light being transmitted (Fig. 27A).

In view of the teaching of Sedlmayr to provide lens at each end of the pipe for the purpose of collimating light entering and leaving the pipe it would have been obvious to one having ordinary skill in the art to additionally modify Tsuji to have the lens as taught by Sedlmayr at both ends of the receive pipe and at the first end of the transmit pipe, in order to collimate light entering and leaving the pipes.

Kawakami teaches a lens 27A for increasing an angle of transmitted light (col. 2, lines 39-43) and it would have been obvious to one having ordinary skill in the art at the time of the invention to additionally modify Tsuji to have the lens as taught by Kawakami, in order to increase the angle of the light exiting the data port so that the light may be more easily received by another device.

Pressler teaches an optical interlink for exchanging information for a peripheral device for a computer, where the transducer and the light pipe are disposed within the

peripheral device and where the light pipe is adapted to optically exchange information with the optical transducer and externally of the peripheral device.

As it is known that a printer is a commonly used peripheral device for a computer, it would have been obvious to one having ordinary skill in the art to modify Tsuji to have the optical interlink in a printer in order to have the convenience of optically transmitting print jobs.

Sedlmayr teaches the conventionality and effectiveness of transmitting infrared light (col. 17, lines 39-41).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have an infrared transducer in order to utilize a form of light which transmits effectively.

### ***Response to Arguments***

3. Applicant's arguments filed 06/30/2003 have been fully considered but they are not persuasive.

Applicant argues that the Tsuji reference does not disclose a fiber optic that passes light to the open environment. Claims 20 and 34 however, actually recite "the transmit light pipe is adapted to exit and diverge light from the optical data port to the open environment and wherein the receive light pipe is adapted to converge light from the open environment." Claims 20 and 34 only require that the light pipes are capable of receiving and transmitting light to the open environment. The optical fibers of Tsuji are capable of receiving and transmitting light rays to the open environment. As evidence that fiber optic cables are capable of receiving and transmitting light rays to

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and from the open environment, see reference character "315" in figure 7 of the Pressler reference. Pressler discloses that fiber optic 315 can receive light rays at 317 from the open environment and transmit light rays to the open environment at 172.

With respect to claims 28 and 41, applicant argues that the Tsuji, Pressler, Sedlmayr, and Kawakami references do not teach the steps of receiving light rays from the open environment at the optical data port and exiting transmitted light rays from the optical data port to the open environment. Pressler teaches light pipes that receive and transmit light rays to and from data ports to the open environment.

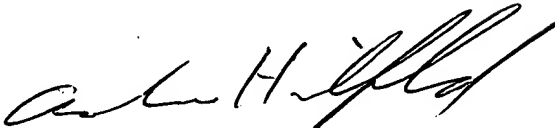
### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin D. Williams whose telephone number is (703) 305-3036. The examiner can normally be reached on Monday - Friday, 8:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (703) 305-6619. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

KDW

  
ANDREW H. HIRSHFELD  
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